

## Quiz 21

-----

### 1. If the boiler safety valves open during boiler operation, you should:

- a. close the non-return valve on the boiler drum
- b. shut the boiler down immediately
- c. increase the forced draft flow to cool the boiler
- d. open the blow-down valves
- e. reduce the fuel and air flow to the boiler

### 2. If the safety valve on a boiler pops and the only pressure gauge indicates well below pop pressure, you would:

- a. notify the Boiler Inspector
- b. reduce boiler pressure and get the gauge checked
- c. shut down to fix the safety valve
- d. increase spring pressure on safety valve
- e. shut down the boiler and replace the safety valve and gauge glass

### 3. In the event of a flame failure, an automatic boiler will close the fuel valve and usually:

- a. begin a re-start cycle immediately
- b. perform a post-purge
- c. reset itself
- d. simply restart itself with no human intervention
- e. stop the boiler feed-pump

### 4. In the event of a low water condition in a boiler the engineer in charge should:

- a. shut down the burner immediately
- b. continue firing and restore the level
- c. shut down the burner, let the unit cool, then inspect it
- d. shut down the burner, let the unit cool, then restore level
- e. notify the Chief Engineer before responding to the condition

### 5. Most furnace explosions are caused because:

- a. the low water fuel cut off failed to operate
- b. there is a very rich fuel mixture present in the furnace
- c. there is an accumulation of scale on the boiler surfaces
- d. the furnace was purged too much
- e. of excessive furnace temperatures

### 6. Most furnace explosions occur:

- a. during the lighting up of a boiler burner
- b. during the shutting down of a burner
- c. during the purge period of lighting a boiler furnace
- d. during the period of increasing the load
- e. when steam pressure is excessive

**7. Poor combustion due to improper amount of air will cause:**

- a. hot furnace temperatures
- b. a collection of partly burned air
- c. a collection of partly burned fuel which could explode
- d. the circulation of flue gases to stop
- e. a high carbon dioxide content in the wind box

**Quiz 21 Answers:**

-----

**1 = e, 2 = b, 3 = b, 4 = c, 5 = b, 6 = a, 7 = c**